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EXAMINER

MILLER, CRAIG S

ART UNIT

PAPER NUMBER

2857

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/164206

Applicant(s)

Dister

Examiner

Craig Steven Miller

Group Art Unit

2857

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 01 February 2002
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-25 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-25 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

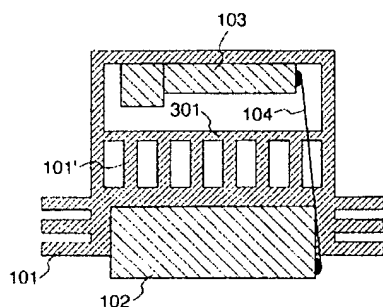
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

1. Upon further consideration, it has been decided that the prosecution of the instant application will be best served by withdrawing the finality of the last action. A new non-final rejection is hereby imposed.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hays *et al.* (6,260,004) or Wang *et al.* (5,566,092), either in view of Emori *et al.* and Lakin *et al.*

As to claims 1-6, 9-11, 13-18, 23 and 24, said claims are directed towards a machine with a container mounted outside the machine which receives operation data from the machine with a heat dissipation device between the container and the outside of the machine. Hays *et al.* discloses in col. 7 lines 16+ that industrial equipment should be remotely monitored *in situ* and that such monitoring should be accomplished with network communications. Wang *et al.* discloses the monitoring of industrial equipment. To the left is an inverted image of figure 8



from Emori *et al.* Item [102] is a high heat generating device, item [103] is electronics which should be heat insulated yet electrically connected to item [102] while encased within electrical shielding. Items [101] and [101'] are heat dissipating fins. Emori *et al.* does not specify that the heat generation device is a dynamoelectric machine. Lakin discloses in col. 1 lines 16+ that a dynamoelectric machine generates heat which is known

to be harmful to associated electronics and that such electronics require heat insulation from high heat generating sources. Neither Wang *et al.* nor Hays *et al.* specify that the monitoring electronics should be mounted upon the industrial equipment. The Examiner notes that it is well known to make integral that which was separate, *In re Larson*, 144 USPQ 347 (CCPA 1965), "Although it is true that invention may be present under some circumstances in making integral that which was separate before, we do not feel that such is the case here. Improved results only will not take the case out of the general rule. There is also a requirement that the unification or integration involves more than mere mechanical skill. *In re Murray*, 19 CCPA (Patents) 739, 53 F.2d 541, 11 USPQ 155; *In re Zabel et al.*, 38 CCPA (Patents) 832, 186 F.2d 735, 88 USPQ 367." Because the devices of Hays *et al.*, Wang *et al.* and Lakin *et al.* are within the art of machine monitoring, because the device of Emori *et al.* is within the general art of electronics mounting,

because it is known to monitor the operation of a rotating machine, because it is known that dynamoelectric machines generate heat which is harmful to electronics, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify either of Hays *et al.* or Wang *et al.* to include the mounting of the monitoring electronics within an arrangement as suggested by Emori *et al.*, with the monitoring electronics within a separate container while being attached to the device to be monitored, so as to receive the obvious benefits derived therefrom such as increased heat insulation and increased resistance to EMF interference from the dynamoelectric machine.

As to claim 7, said claim is directed towards the use of curved fins. Because curved fins are known generally within the art of device cooling, because Emori *et al.* does not preclude the use of such curved fins and because the applicant fails to claim criticality to such a curved fin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include curved fins within the modification of either Hays *et al.* or Wang *et al.* to include device of Emori *et al.* as modified above as a mere obvious design choice absent a showing of unexpected results or synergistic effect by applicant.

As to claim 8, said claim is directed towards the use of fins of differing widths. Because fins of differing widths are known generally within the art of device cooling, because Emori *et al.* does not preclude the use of such different width fins and because the applicant fails to claim criticality to such different width fins, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include different width fins within the modification of either Hays *et al.* or Wang *et al.* to include the device of Emori *et al.* as modified above as a mere obvious design choice absent a showing of unexpected results or synergistic effect by applicant.

As to claim 12, said claim is directed towards the use of fins of differing materials. Because fins of differing materials are known generally within the art of device cooling, because Emori *et al.* does not preclude the use of such different fin materials and because the applicant fails to claim criticality to such different fin materials, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include different fin materials within the modification of either Hays *et al.* or Wang *et al.* to include the device of Emori *et al.* as modified above as a mere obvious design choice absent a showing of unexpected results or

synergistic effect by applicant.

As to claim 17, said claim is directed towards the use of fins of differing lengths. Emori *et al.* discloses cooling fins of differing lengths in fig. 1. Because fins of differing lengths are known generally within the art of device cooling, because it is known generally within the cooling art that heat dissipating fins should be sized so as to prevent inadvertent contact with surfaces, because Emori *et al.* does not preclude the use of such different fin lengths, and because the applicant fails to claim criticality to such different fin lengths, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include different fin lengths within the modification of either Hays *et al.* or Wang *et al.* to include the device of Emori *et al.* as modified above so as to avoid inadvertent contact with a curved surface or as a mere obvious design choice absent a showing of unexpected results or synergistic effect by applicant.

As to claims 19-22, said claims are directed towards the use of a fin cooling fan. Emori *et al.* discloses a fan in column 3, line 4, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within the modification of either Hays *et al.* or Wang *et al.* the fan of Emori *et al.* so as to receive the obvious benefits derived there from such as improved electrical component reliability.

As to claim 25, said claim is directed towards the use of a network backbone. Hays *et al.* disclose such a network backbone in col. 8 lines 32+. Wang *et al.* discloses real-time (col. 8 lines 34+) remote monitoring. The use of a network backbone to accomplish this is deemed required and therefore inherent within the teaching of Wang *et al.*

3. Because of the similarity between the present and prior rejection, it is presumed by the Examiner that many of Applicant's arguments found within the Appeal Brief will be re-presented in response to this Action. In order to promote compact prosecution of this application, the Examiner shall herein present responses to said arguments modified in accordance with the rejection modifications.

With respect to Applicant's arguments at the bottom of page 4, Applicant has characterized the prior art of Emori *et al.* as "*heat sink apparatus which prevent excessive operating temperature in heat-generating electronic components.*" and contrasts this function with the characterization of the instant invention as protecting, "*sensor components... from heat*

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generated by the machine." This argument fails because the claimed structure meets the limitation of the claims, "...the mere fact that the references relied upon by the Patent and Trademark Office fail to evince an appreciation of the problem identified and solved by appellants is not, standing alone, conclusive evidence of the nonobviousness of the claimed subject matter. The references may suggest doing, what an applicant has done even though workers in the art were ignorant of the existence of the problem." In re Gershon, 152 USPQ 602 (CCPA 1967), In re Graf, 145 USPQ 197 (CCPA 1965); In re Finsterwalder, 168 USPQ 530 (CCPA 1971), In re Skoner, 186 USPQ 80 (CCPA 1975), In re Lintner, 173 USPQ 560 (CCPA 1972). The problem facing one of ordinary skill in the art in the instant invention at the time the invention was made consists of a heat source and associated heat sensitive electronics. Emori *et al.* discloses a heat source [102] (in this case, electronic components) and Emori *et al.* specifies associated heat sensitive electronics [103]. Therefore, one of ordinary skill in the art at the time the invention was made, when presented with the knowledge of Emori *et al.*, would be led to a construction as claimed and found within the rejection. It would also be clear to one of ordinary skill in the art at the time the invention was made that heat generated by electronics does not obey different physical laws than does heat generated by a motor or other dynamoelectric machine. Therefore, the source of the heat is irrelevant to the inventor, the steps performed to deal with the heat presented would not fundamentally change when faced with this differing heat source.

With respect to Applicant's arguments at the top of page 5, Applicant has asserted that heat would be transferred from the heat generator towards the associated electronics, this is not agreed with. Emori *et al.* clearly illustrates in fig 2 the movement of heat away from the system. Emori *et al.* also discloses in figure 8 that the associated electronics may optionally be separately encased to provide electronic shielding (col. 8 lines 21+).

With respect to Applicant's arguments at the middle of page 5 and page 8, Applicant argues that the fins of the prior art have differing properties from those of the instant invention and therefore have differing effect. The Examiner notes that the Applicant fails to claim criticality to such properties and if such properties were intended to be critical, such properties are not found within applicant's base claims. Furthermore, applicant's claim 12 includes fins made of die-cast aluminum or cast iron as acceptable materials having the desired properties. Emori *et al.* discloses

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die-cast construction in col. 3 lines 50+, aluminum in col. 3 lines 57+ and cast iron in col. 3 lines 32+.

With respect to applicant's arguments at the bottom of page 5, applicant argues that the heat from the components could not dissipate since the fins would be heated by the machine. In fact, the opposite is put forth by the Examiner, that the heat source dissipates the heat through the fins as envisioned by Emori *et al.*

With respect to applicant's arguments beginning at the bottom of page 6 and continuing through page 7, the applicant has indicated that Emori *et al.* does not disclose the use of a cooling fan and that including such use would not be proper. Upon further review, it is noted that Emori *et al.* does indeed disclose a fan (col. 3, line 4).

With respect to applicant's arguments of page 9, applicant has argued that a backbone connected between a machine and host computer would not have been obvious in view of Emori *et al.* The Examiner has presented Hays *et al.* and Wang *et al.* as proof that such is the case. Hays *et al.* discloses in col. 6 lines 23+ that generators should include a diagnostic system, in col. 7 line 16+ that such diagnostics may be performed through a network and in col. 8 lines 33+ that such a network may be over Ethernet or the Internet. With respect to Wang *et al.*, Wang *et al.* discloses real-time (col. 8 lines 34+) remote monitoring. The use of a network backbone to accomplish this is deemed required and therefore inherent within the teaching of Wang *et al.*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lamberson *et al.* (5,845,230) discloses remote monitoring of machines.

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Craig Steven Miller whose telephone number is (703) 305-9730. Art Unit facsimile services are now available at (703) 308-7722.

The Examiner can normally be reached on Mondays and Thursdays from 07:00am-5:30pm EDT. Should repeated attempts to reach the Examiner be unsuccessful, the Examiner's Supervisor, Marc Hoff may be reached at (703) 308-1677.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Craig Steven Miller (ss)
10 April 2002

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